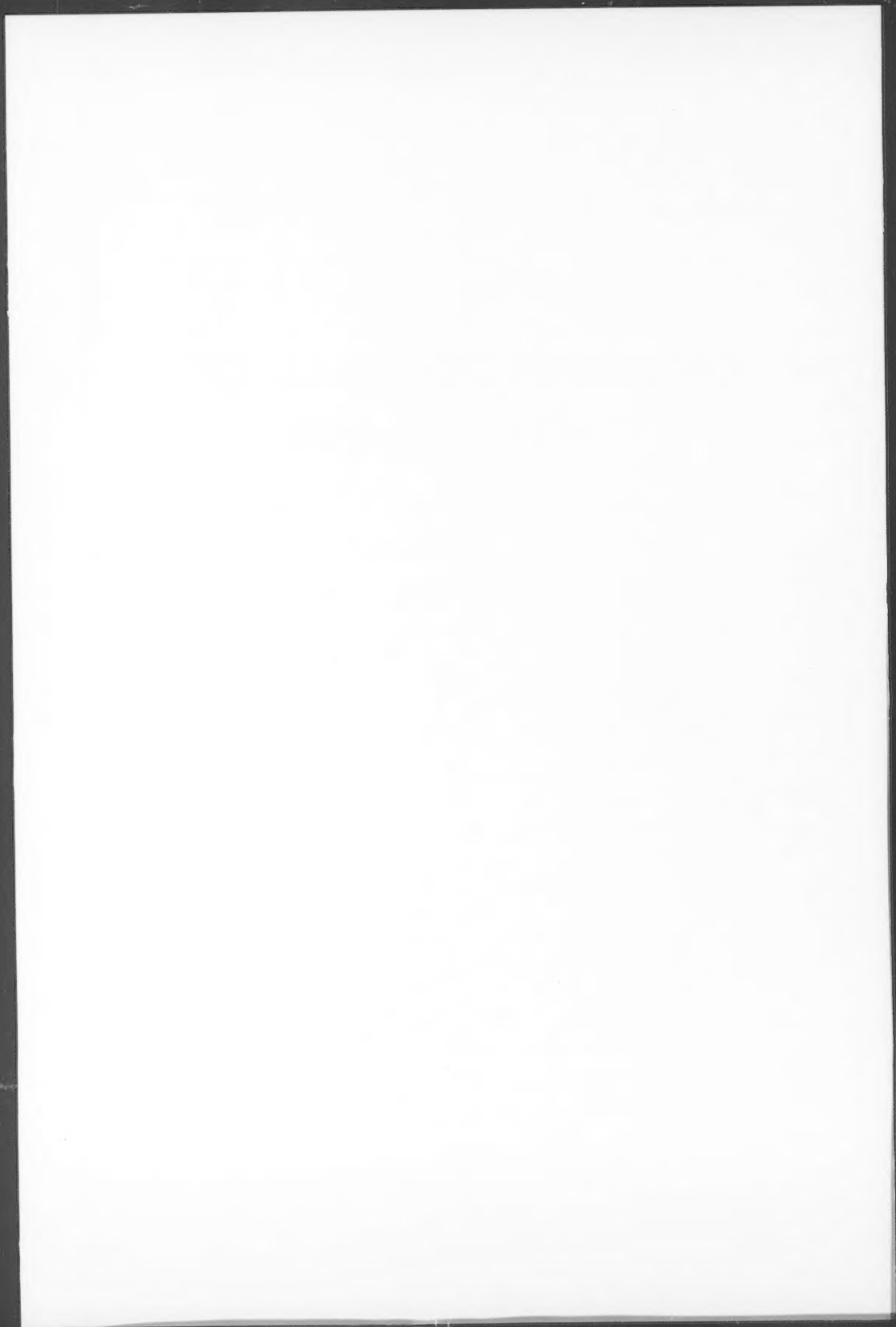


CANADIAN JOURNAL OF PLANT SCIENCE

Volume 58, 1978

Published by the
AGRICULTURAL INSTITUTE OF CANADA
with the cooperation of the
Canadian Society of Agronomy
and the
Canadian Society for Horticultural Science



AUTHOR INDEX

- AALDERS, L. E. See Craig, D. L., 903.
 ABU-SHAKRA, S. See Wassimi, N., 165.
 ALI-KHAN, S. T. Tara field peas, 1123.
 ALLEN, WAYNE R. and DIRKS, VICTOR A. Bacterial canker of sweet cherry in the Niagara Peninsula of Ontario: *Pseudomonas* species involved and cultivar susceptibilities, 363.
 ANTOUN, H. See Bordeleau, L. M., 1125.
 ANTOUN, H., BORDELEAU, L. M. et GAGNON, C. Antagonisme entre *Rhizobium meliloti* et *Fusarium oxysporum* en relation avec l'efficacité symbiotique, 75.
 ASHFORD, R. See Austenson, H. M., 739.
 AUSTENSON, H. M. See Gusta, L. V., 79.
 AUSTENSON, H. M., ASHFORD, R., BIGSBY, F. W., BOWREN, K. E., REED, W. B., WARNOCK, D. J., WENHARDT, A. and WIENS, E. H. A comparison of methods of direct-seeding wheat on stubble land in Saskatchewan, 739.

 BAKER, R. J. See Chiko, Arthur W., 331.
 BAKER, R. J. See De Pauw, R. M., 685.
 BAKER, R. J. Evaluation of the inbred-backcross method for studying the genetics of continuous variation, 7.
 BAKER, R. J. and BUSHUK, W. Inheritance of differences in gliadin electrophoregrams in the progeny of Neepawa and Pitic 62 wheats, 325.
 BANDEEN, J. D. See Machado, Souza V., 977.
 BANTING, J. D. See Best, K. F., 699.
 BARRON, G. L. See Naik, D. M., 1095.
 BASSETT, I. J. and CROMPTON, C. W. The biology of Canadian weeds. 32. *Chenopodium album* L., 1061.
 BASU, P. K., JACKSON, H. R. and WALLEN, V. R. Estimation of pea yield loss from severe root rot and drought stress using aerial photographs and a loss conversion factor, 159.
 BASU, P. K., JACKSON, H. R. and WALLEN, V. R. Alfalfa decline and its cause in mixed hay fields determined by aerial photography and ground survey, 1041.
 BELZILE, L. See Deschênes, J. M., 129.
 BERDAHL, J. D. See Harvey, B. L., 273.
 BERKENKAMP, B., FOLKINS, L. P. and MEERES, J. Resistance of alfalfa cultivars to downy mildew, 893.
 BEST, K. F., BANTING, J. D. and BOWES, G. G. The biology of Canadian weeds. 31. *Hordeum jubatum* L., 699.
 BHOWMIK, PRASANTA C. Germination, growth and development of common milkweed, 493.
 BIGSBY, F. W. See Austenson, H. M., 739.
 BISHOP, G. W. See Craig, D. L., 903.
 BLACK, W. N. Effects of irrigation and nitrogen on a natural pasture sward, 347.
 BOERMA, H. R. See Walker, D. B., 193.
 BOLDUC, R. See Pesant, A. R., 449.
 BOLDUC, R., RANCOURT, L., DOLBEC, P. et CHOUINARD-LA VOIE, L. Mesure de l'endurcissement au froid et de la viabilité des plantes exposées au gel par le dosage des phosphatases acides libres, 1007.
 BOLE, J. B. See Major, D. L., 783.
 BOLTON, A. T. Effects of amending soilless growing mixtures with soil containing antagonistic organisms on root rot and blackleg of geranium (*Pelargonium hortorum*) caused by *Pythium splendens*, 379.
 BOLTON, A. T. Sudden wilting of poinsettia (*Euphorbia pulcherrima*) caused by *Pythium aphanidermatum*, 569.
 BOLTON, J. L. See Faechner, T. R., 891, 945.
 BOND, E. J. See Richardson, L. T., 267.
 BORDELEAU, L. M. See Antoun, H., 75.
 BORDELEAU, L. M. ET ANTOUN, H. Une méthode rapide de préselection des souches de *Rhizobium meliloti*, 1125.
 BORGLUM, B. See Raghavan, G. S. V., 435.

- BOWES, G. G. See Best, K. F., 699.
- BOWREN, K. E. See Waddington, J., 249.
- BOWREN, K. E. See Austenson, H. M., 739.
- *BOWREN, K. E. Methods of managing stubble for cropping on parkland soils in western Canada, 579.
- BOYER, J. See Harvey, B. L., 273.
- BRIGGS, K. G. and FARIS, D. G. Influence of sample size on the relationship between the yielding ability of space-planted and solid-seeded barley cultivars, 263.
- BROWN, R. J. See Dhanvantari, B. N., 953.
- BUCHAN, J. A. See Sosulski, F., 553.
- BURTON, J. H. See Muztar, A. Jabbar, 829, 843, 851.
- BUSBICE, T. H. See Michaud, R., 341.
- BUSCH, L. V. See Naik, D. M., 1095.
- BUSHUK, W. See Baker, R. J., 325.
- BUSHUK, W. and KERBER, E. R. The role of *Triticum carthlicum* in the origin of bread wheat based on gliadin electrophoregrams, 1017.
- BUSHUK, W., RODRIGUEZ-BORES, F. J. and DUBETZ, A. Effects of high rates of nitrogen on Nee-pawa wheat grown under irrigation. III. Protein quality for breadmaking as reflected by various tests, 923.
- BUSHUK, W. and ZILLMAN, R. R. Wheat cultivar identification by gliadin electrophoregrams. I. Apparatus, method and nomenclature, 505.
- CALDER, F. W. See Kunelius, H. T., 691.
- CAMPBELL, D. C. and KONDRA, Z. P. Relationships among growth patterns, yield components and yield of rapeseed, 87.
- CAMPBELL, S. J. and DEDIO, W. Corona sunflower, 561.
- CAMPBELL, S. J., SOSULSKI, F. W. and SABIR, M. A. Development of pectins in sunflower stalks and heads, 863.
- CAVERS, PAUL B. See Turkington, Roy A., 523.
- CESCAS, M. P. See Lamarre, M., 999.
- CHARNETSKI, W. A. See Major, D. J., 783.
- CHIKO, A. W. See Metcalfe, D. R., 885.
- CHIKO, ARTHUR W. and BAKER, R. J. Economic significance of barley stripe mosaic virus in the Canadian prairies, 331.
- CHIKO, ARTHUR W. and ZIMMER, R. C. Effects of pea seed-borne mosaic virus on two cultivars of field pea grown in Manitoba, 1073.
- CHILDERS, W. R., FOLKINS, L. P. and WAUTHY, J. Champ timothy, 895.
- CHIPMAN, E. W. See Cumming, D. B., 175.
- CHIPMAN, E. W. See Gupta, Umesh C., 983.
- CHIYKOWSKI, L. N. and CRAIG, D. L. Plant and insect age as factors in the transmission of clover phyllody (green petal) agent to strawberry by *Aphrodes bicinctus*, 467.
- CHOO, T. M. See Reinbergs, E., 929.
- CHOUINARD-LAVOIE, L. See Bolduc, R., 1007.
- *CHRISTIE, B. R. See Sullivan, J. A., 585.
- CHUBEY, B. B. See Vanstone, D. E., 571.
- *CHUBEY, B. B. and DORRELL, D. G. The effect of fall and spring harvesting on the sugar content of Jerusalem artichoke tubers, 579.
- CHUBEY, B. B. and DORRELL, D. G. Total reducing sugar, fructose and glucose concentrations and root yield of two chicory cultivars as affected by irrigation, fertilizer and harvest dates, 789.
- *CLARK, J. H. See Madill, J. E., 583.
- CLARKE, F. R. See Clarke, J. M., 549.
- CLARKE, J. M. The effects of leaf removal on yield and yield components of *Brassica napus*, 1103.

*Indicates abstract only published.

AUTHOR INDEX

- CLARKE, J. M., CLARKE, F. R. and SIMPSON, G. M. Effects of method and rate of seeding on yield of *Brassica napus*, 549.
- CLARKE, J. M. and SIMPSON, G. M. Growth-analysis of *Brassica napus* cv. Tower, 587.
- CLARKE, J. M. and SIMPSON, G. M. Influence of irrigation and seeding rates on yield and yield components of *Brassica napus* cv. Tower, 731.
- COLBERT, T. R. and ZUBER, M. S. Effects of sampling dates on estimates of stalk quality in maize, 319.
- COMEAU, A. and DUBUC, J. P. Evaluation of new and old sources of tolerance to early-season barley yellow dwarf virus in oats, 875.
- COOKE, D. A. See Smith, J. Drew, 291.
- COURT, WILLIAM A. and ELLIOT, J. M. Influence of nitrogen, phosphorus, potassium, and magnesium on the phenolic constituents of flue-cured tobacco, 543.
- COUTURE, LUC and SUTTON, JOHN C. Efficacies of fungicides in controlling spot blotch of barley, 311.
- CRAIG, D. L. See Chiykowski, L. N., 467.
- CRAIG, D. L., AALDERS, L. E. and BISHOP, G. W. Micmac strawberry, 903.
- CRETE, RENE See Hamilton, Herman A., 45.
- CROMPTON, C. W. See Bassett, I. J., 1061.
- CROWLEY, JACINTA, O'DONOVAN, J. T. and PRENDEVILLE, G. N. Phytotoxicity of soil-applied dichlorofop methyl and its effect on uptake of ⁴⁵Ca in wild oats, barley and wheat, 395.
- CUMMING, D. B., STARK, R. and CHIPMAN, E. W. A feasibility study on the production and processing small whole (prepeeled) rutabaga, 175.
- *CURNOE, W. E. See Madill, J. E., 583.
- CUTCLIFFE, J. A. See Gupta, Umesh C., 63.
- CUTCLIFFE, J. A. See Munro, D. C., 385.
- DARWENT, A. L. and MCKENZIE, J. S. Effects of planting date on the growth and development of narrow-leaved hawk's beard, 1087.
- DAUBENY, HUGH A. Chilcotin red raspberry, 279.
- DAUBENY, HUGH A. Skeena red raspberry, 565.
- DAUBENY, HUGH A. Nootka red raspberry, 899.
- DAYNARD, T. B. See Tollenaar, M., 189, 199, 207, 869.
- DAYNARD, T. B. See Fairey, N. A., 709, 719.
- DAYNARD, T. B. Practices affecting quality and preservation of whole-plant corn silage, 651.
- DEDIO, W. See Campbell, S. J., 561.
- DEDIO, W. Saturn sunflower, 275.
- DEDIO, WALTER. Sunflower performance as related to source of seed and advancing generations, 445.
- DE PAUW, R. M. Effect of seed moisture content at swathing on emergence of fall rye, 557.
- DE PAUW, R. M. and BAKER, R. J. Correlations, heritabilities, and components of variation of four traits in *Brassica campestris*, 685.
- DESCHENES, J. M. et ST-PIERRE, J. C. Etude agro-écologique dans le comté de Rivière-du-Loup: Aspect écologique, 117.
- DESCHENES, J. M., ST-PIERRE, J. C. et BELZILE, L. Etude agro-écologique dans le comté de Rivière-du-Loup: Aspect agronomique, 129.
- *DEVERS, C. L. See Keoghlan, J. M., 581.
- *DEVERS, C. L. and KEOGHAN, J. M. Selecting grass, legume, and grass-legume associations for heavy alkaline clays in the tropics, 579.
- DHANVANTARI, B. N., DIRKS, V. A. and BROWN, R. J. Effectiveness of antibiotics for control of bacterial spot of peach in southwestern Ontario, 953.
- *DIONNE, JEAN LOUIS See Genest, Jean, 580.
- DIRKS, V. A. See Dhanvantari, B. N., 953.
- DIRKS, VICTOR A. See Allen, Wayne R., 363.
- DOLBEC, P. See Bolduc, R., 1007.
- *DORRELL, D. G. See Chubey, B. B., 579, 789.
- DORRELL, D. G. See Huang, H. C., 1107.
- DOWNEY, R. K. See Stringam, G. R., 427.

- *DOWNEY, R. K. See Stringam, G. R., 585.
 DRAPEAU, R. See Pesant, A. R., 449.
 DUBETZ, A. See Bushuk, W., 923.
 DUBUC, J. P. See Comeau, A., 875.
 *DYCK, F. B. See McLaughlin, N. B., 583, 584.
- EATON, G. W. See Lidster, P. D., 283, 357.
 ELLIOT, J. M. See Court, William A., 543.
 ELLIS, B. E. Non-differential sensitivity to the herbicide metribuzin in tomato cell suspension cultures, 775.
 ELSAHOOKIE, M. M. Effects of varying row spacing on linseed yield and quality, 935.
 ESTES, G. O. See Lee, S. S., 55.
 EVANS, L. E. See Scoles, G. J., 745.
 EVANS, L. E. See Marquardt, R. R., 753.
- FAECHNER, T. R. and BOLTON, J. L. Chemical control of alfalfa sickness, 891.
 FAECHNER, T. R. and BOLTON, J. L. Genetics of resistance and susceptibility in alfalfa to alfalfa sick soil, 945.
 FAIREY, N. A. and DAYNARD, T. B. Quantitative distribution of assimilates in component organs of maize during reproductive growth, 709.
 FAIREY, N. A. and DAYNARD, T. B. Assimilate distribution and utilization in maize, 719.
 FARIS, D. G. See Briggs, K. G., 263.
 FARIS, D. G. Effect of a leaf-spotting gene on the yield and yield component development of barley in Northern Canada, 21.
 *FEDAK, GEORGE. Barley \times wheat hybrids, 579.
 FICHTNER, SUZETTE S. See Nassar, Nagib M. A., 577.
 FICK, G. N. See Miller, J. F., 597.
 FISHER, R. W. and WARREN, W. C. A simple laboratory apparatus for dehulling and cleaning small quantities of *Chenopodium* seeds, 909.
 FOLKINS, L. P. See Berkenkamp, B., 893.
 FOLKINS, L. P. See Childers, W. R., 895.
 *FRANCIS, T. R. and KANNENBERG, L. W. Yield stability studies in short-season maize, 580.
 FRANCIS, T. R. and KANNENBERG, L. W. Yield stabilities in short-season maize. I. A descriptive method for grouping genotypes, 1029.
 FRANCIS, T. R. and KANNENBERG, L. W. Yield stability studies in short-season maize. II. Relationship to plant-to-plant variability, 1035.
 FREEMAN, JACK A. Evidence of a phytotoxic interaction between the herbicide Eradicane and the insecticide fonofos in sweet corn, 1119.
 FREYMAN, S. Influence of duration of growth, seed size, and seeding depth on cold hardiness of two hardy winter wheat cultivars, 917.
 FRIESEN, G. H. and HAMILL, A. S. Influence of sunlight on metribuzin injury to transplanted tomatoes, 1115.
- GAGNON, C. See Antoun, H., 75.
 GAGNON, C. See Richard, C., 277.
 GENDRON, G. See Raghaven, G. S. V., 435.
 *GENEST, JEAN and DIONNE, JEAN LOUIS. Effects of hybrid maturity, plant density and N, P, K fertilization on corn silage production, 580.
 GILLESPIE, T. J. and KIDD, G. E. Sensing duration of leaf moisture retention using electrical impedance grids, 179.
 GROSS, KATHERINE L. and WERNER, PATRICIA A. The biology of Canadian weeds. 28. *Verbascum thapsus* L. and *V. blattaria* L., 401.
 GROVER, R., KERR, L. A., MAYBANK, J. and YOSHIDA, K. Field measurement of droplet drift from ground sprayers. I. Sampling, analytical, and data integration techniques, 611.
 GUBBELS, G. H. Interaction of cultivar and seeding rate on various agronomic characteristics of flax, 303.

AUTHOR INDEX

- GUBBELS, G. H. Yield, seed weight, hull percentage, and testa color of buckwheat at two soil moisture regimes, 881.
- GUPTA, UMESH C., CHIPMAN, E. W. and MACKEY, D. C. Effects of molybdenum and lime on the yield and molybdenum concentration of crops grown on acid sphagnum peat soil, 983.
- GUPTA, UMESH C. and CUTCLIFFE, J. A. Effects of methods of boron application on leaf tissue concentration of boron and control of brown-heart in rutabaga, 63.
- GUSTA, L. V., KIRKLAND, K. J. and AUSTENSON, H. M. Effects of a brief magnetic exposure on cereal germination and seedling growth, 79.
- GUSTAFSON, J. P. See Larter, E. N., 879.
- HALL, IVAN V., WOOD, GEORGE W. and JACKSON, LLOYD P. The biology of Canadian weeds. 30. *Pyrus melanocarpa* (Michx.) Willd., 499.
- HALLAB, A. H. See Wassimi, N., 165.
- HAMILL, A. S. See Friesen, G. H., 1115.
- HAMILTON, HERMAN A. and CRETE, RENE. Influence of soil moisture, soil pH, and liming sources on the incidence of clubroot, the germination and growth of cabbage produced in mineral and organic soils under controlled conditions, 45.
- HAMILTON, R. I. See Major, D. J., 643.
- HARVEY, B. L., BERDAHL, J. D., ZAMOLSKY, W. N., BOYER, J. and ROSSNAGEL, B. G. Melvin barley, 273.
- *HEINRICHS, D. H. See Knipfel, J. E., 581.
- HICKLENTON, PETER R. and JOLLIFFE, A. Effects of greenhouse CO₂ enrichment on the yield and photosynthetic physiology of tomato plants, 801.
- HILL, ROBERT D. See Salminen, Seppo O., 13.
- *HOLT, N. W. and SOSULSKI, F. W. Amino acid composition of field peas, 580.
- HUANG, H. C. and DORRELL, D. G. Screening sunflower seedlings for resistance to the toxins of *Sclerotinia sclerotiorum*, 1107.
- HUNTER, R. B. See Smith, C. S., 95, 101.
- HUNTER, R. B. Selection and evaluation procedures for whole-plant corn silage, 661.
- IVANY, J. A. Effects of quack grass competition on silage corn yield, 539.
- JACKSON, H. R. See Basu, P. K., 159, 1041.
- JACKSON, LLOYD P. See Hall, Ivan V., 499.
- JARVIS, W. R. See Von Stryk, F. G., 623.
- *JENKINSON, R. C. See Smid, A. E., 584.
- JOHNSON, A. G. See Tsujita, M. J., 287.
- JOHNSTON, H. W., SANDERSON, J. B. and MACLEOD, J. A. Cropping mixtures of field peas and cereals in Prince Edward Island, 421.
- JOLLIFFE, A. See Hicklenton, Peter R., 801.
- KANNANGARA, TISSA. See Stout, Darryl G., 225.
- KANNENBERG, L. W. See Smith, C. S., 95, 101.
- *KANNENBERG, L. W. See Francis, T. R., 580.
- KANNENBERG, L. W. See Francis, T. R., 1029, 1035.
- KASHA, K. J. See Reinbergs, E., 929.
- *KEOGHAN, J. M. See Devers, C. L., 579.
- *KEOGHAN, J. M. and DEVERS, C. L. Grasses for drier parts of the Caribbean, 581.
- KEMP, G. A. Growth of primary leaves of beans (*Phaseolus vulgaris* L.) under suboptimal temperatures, 169.
- KEMP, W. G. and TROUP, P. A. A weather index to forecast potential incidence of aphid-transmitted virus diseases of peppers in the Niagara Peninsula, 1025.
- KERBER, E. R. See Bushuk, W., 1019.
- KERR, L. A. See Grover, R., 611.
- KETCHESON, J. W. See Rowberry, R. G., 779.
- KHERADNAM, M. See Niknejad, M., 235.

- KHOSH-KHUI, M. See Niknejad, M., 235.
- KHOSH-KHUI, M., ROUHANI, I. and SHAYBANY, B. Axillary shoot stimulation and plant development of coleus treated with certain plant growth regulators, 971.
- KIDD, G. E. See Gillespie, T. J., 179.
- *KILCHER, M. R. See Knipfel, J. E., 582.
- *KILCHER, M. R. See Leyshon, A. J., 582.
- KILCHER, M. R. Perennials and annuals for winter fodder production in the drier portions of the Canadian prairies, 1081.
- *KILCHER, M. R. and KNIPFEL, J. E. Effects of seeding patterns with grass and legume on sward and cow-calf performance, 581.
- KILPATRICK, R. A. and UECKER, F. A. Fungi on Stokes aster plants, 471.
- KIRKLAND, K. J. See Gusta, L. V., 79.
- *KNIPFEL, J. E. See Kilcher, M. R., 581.
- *KNIPFEL, J. E. and KILCHER, M. R. Relationships of selected blood metabolites to nutritional quality of pasture and performance of grazing cows and calves, 582.
- *KNIPFEL, J. E. and HEINRICHS, D. H. Nutritional quality of crested wheatgrass, Russian wild ryegrass, and Altai wild ryegrass throughout the grazing season in southwestern Saskatchewan, 581.
- *KNOWLES, R. P. Comparisons of cultivar hybrids and blends with pure cultivars in crested wheatgrass, 582.
- KONDRA, Z. P. See Campbell, D. C., 87.
- KOSMOLAK, F. G. Grinding time — A screening test for kernel hardness in wheat, 415.
- KUNELIUS, H. T. and CALDER, F. W. Effects of rates of N and regrowth intervals in yields and quality of Italian ryegrass grown as a summer annual, 691.
- KUNELIUS, H. T. and SUZUKI, MICHIO. Quality of timothy, brome grass and orchardgrass silages as influenced by N fertilization, harvest and ensiling treatment, 29.
- LAMARRE, M. et CESCAS, M. P. Les effets de la fertilization N, P et K sur la production du tabac à cigarette, 999.
- LANE, W. DAVID. Sundrop apricot, 905.
- LARTER, E. N., GUSTAFSON, J. P. and ZILLINSKY, F. J. Welsh triticale, 879.
- LAVIGNE, P. See Machado, Souza V., 977.
- LAWRENCE, T. An evaluation of thirty grass populations as forage crops for southwestern Saskatchewan, 107.
- LE, H. H. See Raghavan, G. S. V., 435.
- LEE, J. M. and LOONEY, N. E. A physiological and morphological assessment of little cherry disease of *Prunus avium* in British Columbia, 371.
- LEE, J. M. and LOONEY, N. E. Changes in abscisic acid and gibberellin levels in apple seeds during stratification and their relationship to genetic compaction, 761.
- LEE, S. S., ESTES, G. O. and WELLS, O. S. Effects of slitted polyethylene mulches on soil temperature and yield of sweet corn, 55.
- LEISLE, D. Coulter durum wheat, 551.
- *LEYSHON, A. J. and KILCHER, M. R. Effects of a single large application of fertilizer upon the subsequent ten-year yields of three grasses, 582.
- LIDSTER, P. D. See Porritt, S. W., 41.
- LIDSTER, P. D. and PORRITT, S. W. Some factors affecting uptake of calcium by apples dipped after harvest in calcium chloride solution, 35.
- LIDSTER, P. D. and PORRITT, S. W. The influence of humidity on the response of Spartan apples to pre-storage high temperature treatment, 1111.
- LIDSTER, P. D., PORRITT, S. W. and EATON, G. W. Effects of spray applications of boron, strontium and calcium on breakdown development in Spartan apples, 283.
- LIDSTER, P. D., PORRITT, S. W. and EATON, G. W. The effect of fruit size and method of calcium chloride application on fruit calcium content and breakdown in Spartan apples, 357.
- LIPTAY, A. and MARRIAGE, P. B. Protection of plug-mix seeded tomatoes and cauliflower from metribuzin injury by specific placement of an activated charcoal-vermiculite mixture, 517.
- *LITTLEJOHNS, D. A. and McLAREN, A. D. The effect of row width and plant population on the performance of semi-dwarf and indeterminate soybean types, 583.

AUTHOR INDEX

- LOOMAN, J. Biological flora of the Canadian prairie provinces. V. *Koeleria gracillis* Pers., 459.
- LOONEY, N. E. See Lee, J. M., 371, 761.
- LUMIS, G. P. and ORMROD, D. P. Effects of ozone on growth of four woody ornamental plants, 769.
- *MACDONALD, D. W. See Madill, J. E., 583.
- MACKAY, D. C. See Munro, D. C., 385.
- MACKAY, D. C. See Gupta, Umesh C., 983.
- MACLEOD, J. A. See Johnston, H. W., 421.
- MACHADO, V. SOUZA, BANDEEN, J. D., STEPHENSON, G. R. and LAVIGNE, P. Uniparental inheritance of chloroplast atrazine tolerance in *Brassica campestris*, 977.
- MACHADO, V. SOUZA, NONNECKE, I. L. and PHATAK, S. C. Bioassay to screen tomato seedlings for tolerance to metribuzin, 823.
- *MADILL, J. E., CURNOE, W. E., MACDONALD, D. W. and CLARK, J. H. Yellow mustard seed production in eastern Ontario and development of agronomic recommendations, 583.
- MAFTOUN, M. and SEPASKHAH, A. R. Effects of temperature and osmotic potential on germination of sunflower and safflower and on hormone-treated sunflower seeds, 295.
- MAJOR, D. J., BOLE, J. B. and CHARNETSKI, W. A. Distribution of photosynthates after ¹⁴CO₂ assimilation by stems, leaves, and pods of rape plants, 783.
- MAJOR, D. J. and HAMILTON, R. I. Adaptation of corn for whole-plant silage in Canada, 643.
- MARQUARDT, R. R., WARD, A. T. and EVANS, L. E. Comparative properties of tannin-free and tannin-containing cultivars of faba beans (*Vicia faba*), 753.
- MARRIAGE, P. B. See Liptay, A., 517.
- MARTENS, J. W. See Metcalfe, D. R., 885.
- MAUN, M. A. and McLEOD, W. J. Absorption and metabolism of metribuzin in barnyard grass and American nightshade, 485.
- MAYBANK, J. See Grover, R., 611.
- MCGREGOR, D. I. Thiocyanate ion, a hydrolysis product of glucosinolates from rape and mustard seed, 795.
- *MCKENZIE, J. S. See Suzuki, M., 585.
- MCKENZIE, J. S. See Darwent, A. L., 1087.
- McKYES, E. See Raghavan, G. S. V., 435.
- *MCLAREN, A. D. See Littlejohns, D. A., 583.
- *MCLAREN, A. D. See Smid, A. E., 584.
- MCLAUGHLIN, N. B. A silage coring devise, 573.
- *MCLAUGHLIN, N. B., DYCK, F. B. and TOWNLEY-SMITH, T. F. A microplot seeder, 584.
- *MCLAUGHLIN, N. B. and DYCK, F. B. Semi-automatic pot watering devices for greenhouse experiments, 583.
- *MCLAUGHLIN, N. B. and TOWNSLEY-SMITH, T. F. An automatic sample weight recording system, 583.
- *MCLEAN, A. Weather factors determining the success of seeding dryland ranges, 584.
- MCLEOD, W. J. See Maun, M. A., 485.
- MEERES, J. See Berkenkamp, B., 893.
- METCALFE, D. R., CHIKO, A. W., MARTENS, J. W. and TEKAUZ, A. Reaction of Ethiopian barleys to Canadian barley pathogens, 885.
- MICHAUD, R. See Richard, C., 277.
- MICHAUD, R. and BUSBICE, T. H. Influence of cytoplasm on seed setting in alfalfa, 341.
- MILLER, J. F. and FICK, G. N. Influence of plant population on performance of sunflower hybrids, 597.
- MUNRO, D. C., MACKAY, D. C. and CUTCLIFFE, J. A. Relation of nutrient content of broccoli and Brussels sprouts leaves to maturity and fertilization with N, P, K, and manure, 385.
- MURR, D. P. See Tsujita, M. J., 287.
- MUZTAR, A. JABBAR, SLINGER, S. J. and BURTON, J. H. Chemical composition of aquatic macrophytes. I. Investigation of organic constituents and nutritional potential, 829.
- MUZTAR, A. JABBAR, SLINGER, S. J. and BURTON, J. H. Chemical composition of aquatic macrophytes. II. Amino acid composition of the protein and non-protein fractions, 843.

- MUZTAR, A. JABBAR, SLINGER, S. J. and BURTON, J. H. Chemical composition of aquatic macrophytes. III. Mineral composition of freshwater macrophytes and their potential for mineral nutrient removal from lake water, 851.
- NAIK, D. M., BUSCH, L. V. and BARRON, G. L. Influence of temperature on the strain of *Fusarium graminearum* Schwabe in zearalenone production, 1095.
- NASSAR, NAGIB M. A. Wild *Manihot* species of Central Brazil for cassava breeding, 257.
- NASSAR, NAGIB M. A. Some further species of *Manihot* with potential value to cassava breeding, 915.
- NASSAR, NAGIB M. A. and FICHTNER, SUZETTE S. Hydrocyanic acid content in some wild *Manihot* (cassava) species, 577.
- NELSON, S. H. A test for juvenility as an index of rootability in clonal apple rootstocks, 605.
- NEILSEN, J. Frequency and geographical distribution of resistance to *Ustilago* in six wild species of *Avena*, 1099.
- NIKNEJAD, M., KHERADNAM, M. and KHOSH-KHUI, M. Spontaneous somatic mutation frequency for seed color in a mutable chickpea pure line and its modification by chemical mutagens, 235.
- NONNECKE, I. L. See Machado, V. Souza, 823.
- O'DONOVAN, J. T. See Crowley, Jacinta, 395.
- ORMROD, D. P. See Lumis, G. P., 769.
- O'SULLIVAN, JOHN. Effects of rotation and nitrogen on yield and quality of potatoes, 475.
- PESANT, A. R., BOLDUC, R. et DRAPEAU, R. Effets de certains facteurs climatiques et édaphiques sur la survie à l'hiver de la luzerne au Québec, 449.
- PETRIE, G. A. See Verma, P. R., 69.
- PHATAK, S. C. See Machado, V. Souza, 823.
- PITTMAN, U. J. and TIPPLES, K. H. Survival, yield, protein content, and baking quality of hard red winter wheats grown under various fertilizer practices in southern Alberta, 1049.
- PORRITT, S. W. See Lidster, P. D., 35, 283, 357, 1111.
- PORRITT, S. W. and LIDSTER, P. D. Effect of time of washing on calcium uptake, breakdown and condition of Spartan apples dipped in calcium chloride solution after harvest, 41.
- *POTTER, J. See Sullivan, J. A., 585.
- POTTER, J. W. See Townshend, J. L., 939.
- PRENDEVILLE, G. N. See Crowley, Jacinta, 395.
- PUTNAM, L. G. Diapause and cold hardiness in *Microplitis plutellae*, a parasite of the larvae of the diamondback moth, 911.
- RAGHAVAN, G. S. V., McKYES, E., GENDRON, G., BORGLUM, B. and LE, H. H. Effects of soil compaction on development and yield of corn (maize), 435.
- RAHE, J. E. See Uthkede, R. S., 819.
- RANCOURT, L. See Bolduc, R., 1007.
- REED, W. B. See Austenson, H. M., 739.
- REINBERGS, E. Bruce barley, 269.
- REINBERGS, E., SONG, L. S. P., CHOO, T. M. and KASHA, K. J. Yield stability of doubled haploid lines of barley, 929.
- REMPEL, ERIKA. See Turkington, Roy A., 523.
- RICHARD, C., MICHAUD, R. et GAGNON, C. Obtention d'une souche de luzerne résistante à l'antracnose, 277.
- RICHARDSON, L. T. and BOND, E. J. Methyl bromide fumigation of rapeseed infested with sclerotia of *Sclerotinia sclerotiorum*, 267.
- RODRIGUEZ-BORES, F. J. See Bushuk, W., 923.
- ROSS, R. G., WOOD, F. A. and STARK, R. Ethylenebisdithiocarbamate and ethylenethiourea residues in apples and apple products following sprays of mancozeb and metiram, 601.
- ROSSNAGEL, B. G. See Harvey, B. L., 273.
- ROUHANI, I. See Khosh-Khui, M., 971.

AUTHOR INDEX

- ROWBERRY, R. G. and KETCHESON, J. W. Sources of potassium in potato fertilizer and times of application, 779.
- ROWLAND, G. G. Effects of planting and swathing dates on yield, quality and other characters of faba beans (*Vicia faba*) in central Saskatchewan, 1.
- SABIR, M. A. See Campbell, S. J., 863.
- SALMINEN, SEPPO O. and HILL, ROBERT D. Rate and duration of dry matter accumulation in relation to kernel shrivelling in triticale, 13.
- SANDERSON, J. B. See Johnston, H. W., 421.
- SCOLES, G. J. and EVANS, L. E. Hybrid vigor obtained by crossing inbred lines of spring rye, 745.
- SEPASKHAH, A. R. See Maftoun, M., 295.
- SHARMA, M. P. and VANDEN BORN, W. H. The biology of Canadian weeds. 27. *Avena fatua* L., 141.
- SHAYBANY, B. See Khosh-Khui, M., 971.
- SIMPSON, G. M. See Clarke, J. M., 549, 587, 731.
- SIMPSON, GRAHAM M. See Stout, Darryl G., 213, 225.
- SINHA, R. N. and VOISEY, P. W. Seed coat puncture resistance in cereal and oilseed cultivars — A possible source of susceptibility to insect damage in stored grains, 679.
- SLINGER, S. J. See Muztar, A. Jabbar, 829, 843, 851.
- SMITH, C. S., KANNENBERG, L. W. and HUNTER, R. B. Development of maize gene pools at high plant densities. I. Effect on population structure, 95.
- SMITH, C. S., KANNENBERG, L. W. and HUNTER, R. B. Development of maize gene pools at high plant densities. II. Effect on grain yield, 101.
- SMITH, J. DREW and COOKE, D. A. Dormie Kentucky bluegrass, 291.
- SONG, L. S. P. See Reinbergs, E., 929.
- SOSULSKI, F. and BUCHAN, J. A. Effects of *Rhizobium* and nitrogen fertilizer on nitrogen fixation and growth of field peas, 553.
- *SOSULSKI, F. W. See Holt, N. W., 580.
- SOSULSKI, F. W. See Campbell, S. J., 863.
- *SMID, A. E., JENKINSON, R. C. and McLAREN, A. D. Effects of rate and date of seeding and variety on productivity of winter wheat in Ontario, 584.
- STARK, R. See Cumming, D. B., 175.
- STARK, R. See Ross, R. G., 601.
- STEPHENSON, G. R. See Machado, V. Souza., 977.
- STOUT, DARRYL G., KANNANGARA, TISSA and SIMPSON, GRAHAM M. Drought resistance of *Sorghum bicolor*. 2. Water stress effects on growth, 225.
- STOUT, DARRYL G. and SIMPSON, GRAHAM M. Drought resistance of *Sorghum bicolor*. 1. Drought avoidance mechanisms related to leaf water status, 213.
- STRINGAM, G. R. and DOWNEY, R. K. Effectiveness of isolation distance in turnip rape, 427.
- ST-PIERRE, J. C. See Deschênes, J. M., 117, 129.
- *STRINGAM, G. R. and DOWNEY, R. K. Effects of isolation distances and pedigree seed production in rapeseed, 585.
- *SULLIVAN, J. A., CHRISTIE, B. R. and POTTER, J. The inheritance of resistance to the northern root knot nematode in Vernal alfalfa, 585.
- SUTTON, JOHN C. See Couture, Luc, 311.
- *SUZUKI, M. and McKENZIE, J. S. Winter survival of alfalfa under continental and maritime climates in Canada, 585.
- SUZUKI, MICHIO See Kunelius, H. T., 29.
- SVEJDA, FELICITAS. John Cabot rose, 907.
- TANNOUS, R. See Wassimi, N., 165.
- TEKAUZ, A. See Metcalfe, D. R., 885.
- TIPPLES, K. H. See Pittman, U. J., 1049.
- TOLLENAAR, M. and DAYNARD, T. B. Kernel growth and development at two positions on the ear of maize (*Zea mays*), 189.

- TOLLENAAR, M. and DAYNARD, T. B. Dry weight, soluble sugar content, and starch content of maize kernels during the early postsilking period, 199.
- TOLLENAAR, M. and DAYNARD, T. B. Effect of defoliation on kernel development in maize, 207.
- TOLLENAAR, M. and DAYNARD, T. B. Leaf senescence in short-season maize hybrids, 869.
- *TOMES, D. T. Practical utilization of tissue culture procedures in a plant breeding program, 586.
- *TOWNLEY-SMITH, T. F. See McLaughlin, N. B., 583, 584.
- TOWNSHEND, J. L. and POTTER, J. W. Yield losses among forage legumes infected with *Meloidogyne hapla*, 939.
- TROUP, P. A. See Kemp, W. G., 1025.
- TSUJITA, M. J., MURR, D. P. and JOHNSON, A. G. Influence of phosphorus nutrition and ancymidol on leaf senescence and growth of Easter lily, 287.
- TURKINGTON, ROY A., CAVERS, PAUL B. and REMPEL, ERIKA. The biology of Canadian weeds. 29. *Melilotus alba* Desr. and *M. officinalis* (L.) Lam., 523.
- UECKER, F. A. See Kilpatrick, R. A., 471.
- UTKHEDE, R. S. and RAHE, J. E. Screening world onion germplasm collection for resistance to white rot, 819.
- VANDEN BORN, W. H. See Sharma, M. P., 141.
- VANSTONE, D. E. and CHUBEY, B. B. Herbicides for control of volunteer Jerusalem artichoke, 571.
- VERMA, P. R. and PETRIE, G. A. A detached-leaf culture technique for the study of white rust disease of *Brassica* species, 69.
- VOISEY, P. W. See Sinha, R. N., 679.
- VON STRYK, F. G. and JARVIS, W. R. Residues of mancozeb, maneb and ethylenethiourea in fungicide-treated field and greenhouse tomatoes, 623.
- WADDINGTON, J. Growth of barley, brome grass and alfalfa in the greenhouse in soil containing rapeseed and wheat residues, 241.
- WADDINGTON, J. and BOWREN, K. E. Effects of crop residues on production of barley, brome grass and alfalfa in the greenhouse and of barley in the field, 249.
- WALKER, D. B. and BOERMA, H. R. Morphological study of the mechanism causing brachytic stem in soybeans, 993.
- WALLEN, V. R. See Basu, P. K., 159, 1041.
- WARD, A. T. See Marquardt, R. R., 753.
- WARNOCK, D. J. See Austenson, H. M., 739.
- WARREN, W. C. See Fisher, R. W., 909.
- WASSIMI, N., ABU-SHAKRA, S., TANNOUS, R. and HALLAB, A. H. Effect of mineral nutrition on cooking quality of lentils, 165.
- WAUTHY, J. See Childers, W. R., 895.
- WEBSTER, D. H. Soil conditions associated with absence or sparse development of apple roots, 961.
- WELLS, O. S. See Lee, S. S., 55.
- WENHARDT, A. See Austenson, H. M., 739.
- WERNER, PATRICIA A. See Gross, Katherine, L., 401.
- WHITE, R. P. Cultural practices affecting maturity and yield of corn (*Zea mays*) for whole-plant silage in short-season areas, 629.
- WIENS, E. H. See Austenson, H. M., 739.
- WOOD, F. A. See Ross, R. G., 601.
- WOOD, GEORGE W. See Hall, Ivan V., 499.
- YOSHIDA, K. See Grover, R., 611.
- ZAMOLSKY, W. N. See Harvey, B. L., 273.
- ZILLINSKY, F. J. See Larter, E. N., 879.
- ZILLMAN, R. R. See Bushuk, W., 505.
- ZIMMER, R. C. See Chiko, Arthur, W., 1073.
- ZUBER, M. S. See Colbert, T. R., 319.

